DRAFT STATE AND FEDERAL ELEMENT OF SOUTH COAST STATE IMPLEMENTATION PLAN

January 2003

California Environmental Protection Agency

Air Resources Board

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SECTION I

OVERVIEW

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INTRODUCTION

The Air Resources Board (ARB or Board) proposes to replace the existing control strategy in the approved South Coast State Implementation Plan (SIP) with the updated and expanded strategy described here for sources under State and federal jurisdiction, including mobile sources, fuels and fueling infrastructure, consumer products, and pesticides. Most of the existing near-term SIP measures have been adopted by the responsible agency, along with additional controls to reduce emissions. The baseline emission inventory in this document reflects the benefits of State and federal measures adopted since the 1994 SIP, including those shown in Table I-1.

Table I-1
State and Federal Measures Adopted Since 1994 SIP
(commitments and reductions achieved in 2010 based on inventory from 1997 SIP as amended in 1999)

			ROG		NOx	
Near-Term Measures	**Agency**	**Adopted**	**Commit-ment**	**Achieved in 2010**	**Commit-ment**	**Achieved in 2010**
M1: Light-duty vehicle scrappage	ARB	1998	19	0	17	0
M2: Low Emission Vehicle II program	ARB	1998		4		43
M3: Medium-duty vehicles	ARB	1995	Baseline[1]	-	Baseline[1]	-
M4: Incentives for clean engines (Moyer Program)	ARB	1999	9	0	62	3
M5: California heavy-duty diesel vehicle standards	ARB	1998		5		44
M6: National heavy-duty diesel vehicle standards	USEPA	1998		1		11
M7: Heavy-duty vehicle scrappage	ARB	Withdrawn		NA		NA
M17: In-use reductions from heavy-duty vehicles	ARB	No		0		0
M8: Heavy-duty gasoline vehicle standards	ARB	1995	Baseline[1]	-	Baseline[1]	-
M9: CA heavy-duty off-road diesel engine standards	ARB	2000	4	4	47	18
M10: National heavy-duty off-road diesel engine stds	USEPA	1998		6		25
M11: CA large off-road gas/LPG engine standards	ARB	1998	32	16	17	5
M12: National large off-road gas/LPG engine stds	USEPA	2002		14		5
M13: Marine vessel standards	USEPA	1999	0	0	15	2
M14: Locomotive engine standards	USEPA	1997	0	0	17	17
M15: Aircraft standards	USEPA	No	3	0	6	0
M16: Marine pleasurecraft standards	USEPA	1996	21	17	0	0
CP2: Consumer products mid-term measures	ARB	1997/1999	34	15	0	0
CP3: Aerosol paint standards	ARB	1995/1998	Baseline[1]	-	-	-
Enhanced I/M (Smog Check II)	BAR	1995	Baseline[1]	(6)	Baseline[1]	-
DPR-1: Emission reductions from pesticides	DPR	Voluntary	1	1	0	0
Adopted measures not originally included in SIP						
Clean fuels measures	ARB	Multiple		13		12
Marine pleasurecraft (reductions beyond M16)	ARB	1998/2001		7		0
Motorcycle Standards	ARB	1998		1		0
Urban transit buses	ARB	2000		0		1
Enhanced vapor recovery program	ARB	2000		6		0
Medium/heavy-duty gasoline standards (beyond M8)	ARB	2000		0		1
2007 heavy-duty diesel truck standards (beyond M5 and M6)	ARB/ USEPA	2001		1		16
Small off-road engine standard revisions	ARB	1998		(1)		0
NEAR-TERM TOTAL			**125**	**105**	**181**	**203**

Long-Term Measures (Section 182(e)(5))						
Advanced technology on-road mobile "Black Box"	ARB	No	37	0	6	-[2]
Advanced technology off-road mobile "Black Box"	ARB	No	18	0	3	-[2]
CP4: Long-term measure for consumer products	ARB	No	43	0	0	0
LONG-TERM TOTAL			**98**	**0**	**9**	-[2]
GRAND TOTAL (near-term + long-term)			**223**	**105**	**190**	**203**
Remaining State and Federal Obligations under 1999 SIP			**118**		**0**	

Emission reductions from individual measure may not add to total due to rounding.
( ) = Emission increase relative to baseline.

[1] Measures M3, M8, CP3, and the Smog Check II program from the 1994 SIP had already been adopted when the SIP was revised in 1997. The reductions from these measures are included in the 1997 SIP baseline. Although the Smog Check II program is achieving significant benefits, the emission reductions are less than anticipated in the 1997 SIP as indicated by the negative number under reductions achieved.

[2] The NOx reductions anticipated from the long-term mobile source "Black Box" commitment have already been achieved from adopted measures.

This document describes the comprehensive new strategy for ARB, the State Bureau of Automotive Repair (BAR), the U.S. Environmental Protection Agency (U.S. EPA) and other federal agencies to reduce ozone-forming emissions in the South Coast Air Basin by 2010. Lowering ozone precursor emissions will also help cut secondary particulate matter formation. The existing strategy for the State Department of Pesticide Regulation (DPR) remains in place for the South Coast.

While the emissions estimates and proposed commitments in this document apply to the South Coast, the resulting new measures would generally be implemented statewide. As other regions of California develop SIPs that demonstrate a need for these measures in the proposed implementation timeframe, ARB will provide the appropriate commitment language and benefit estimates. As part of this process, ARB will also work with each region to identify any additional strategies that are needed based on the nature of the problems in a particular region.

A. NEW STATE AND FEDERAL CONTROL STRATEGY

1. Air Resources Board Measures

This SIP element has three components: an adoption schedule, defined control measures, and a long-term strategy commitment.

The total emission reductions in Table I-2 and the obligation to propose specific measures for Board consideration would become enforceable upon approval by U.S. EPA of the comprehensive control strategy and revised attainment demonstration in the 2003 South Coast SIP. The commitments for emission reductions would be calculated using the inventory of the 2003 South Coast SIP.

a. ARB Commitment to Reduce Emissions via a Biennial Adoption Schedule

ARB will commit to adopt and implement measures to achieve a specific level of ROG and NOx emission reductions in tons per day in the South Coast Air Basin in 2010. The emission reduction commitment may be expressed as a range. In that case, reductions in excess of the minimum emission reduction commitment for a given period may be applied to the commitment for subsequent years. ARB may meet this commitment by adopting one or more of the control measures in Table I-3, by adopting one or more alternative control measure, or by implementing incentive program(s), so long as the aggregate emission reductions therefrom comply with the schedule for adoption.

For the purposes of this draft, Table I-2 shows the range of emission reductions that the State may commit to adopt by 2010. ARB staff intends to propose specific adoption commitments for 2003, 2004-2005, and 2006-2009 in the final SIP.

Table I-2
Potential ARB Adoption Commitments*
(emission reductions in tons per day in 2010)

	TOTAL STATE
ROG	25.4-65.1
NOx	16.3-37.7

*does not include long-term “Black Box” commitment

b. ARB Commitment to Propose Defined Control Measures

In addition to the commitment to reduce emissions via a biennial adoption schedule, the ARB staff also commits to submit to the Board and propose for adoption the control measures set forth in Table I-3. The staff proposal for each control measure shall, at a minimum, achieve the estimated emission reductions set forth in Table I-3. Where a range of estimated emission reductions is set forth for a measure in Table I-3, the staff proposal shall, at a minimum, achieve the bottom end of the range of estimated emission reductions set forth in Table I-3. The Board shall take action thereon on or before the adoption dates set forth in Table I-3. Such action by the Board may include any action within its discretion.

For more information about individual measures, please refer to the descriptions in Sections II and III.

Table I-3
Air Resources Board Defined Measures

Strategy	Name	Final Action Date	Reductions in Tons per Day (2010)	
			ROG	NOx
LT/MED-DUTY-1	Replace or Upgrade Emission Control Systems on Existing Passenger Vehicles – Pilot Program	2005	0-21	0-14
ON-RD HVY-DUTY-1	Augment Truck and Bus Highway Inspections with Community-Based Inspections	2003	0-0.1	0
ON-RD HVY-DUTY-2	Capture and Control Vapors from Gasoline Cargo Tankers	2003	4-5	0
ON-RD HVY-DUTY-3	Pursue Approaches to Clean Up the Existing and New Truck/Bus Fleet	2003-2005	1.3-4.3	8-11
OFF-RD CI-1	Set Lower Emission Standards for New Off-Road Compression Ignition Engines	2004	0-0.1	0
OFF-RD CI-2	Pursue Approaches to Clean Up the Existing Heavy-Duty Off-Road Equipment Fleet (Compression Ignition Engines) – Retrofit Controls	2004-2008	2.3-7.8	NQ
OFF-RD CI-3	Implement Registration and Inspection Program for Existing Heavy-Duty Off-Road Equipment to Detect Excess Emissions (Compression Ignition Engines)	2006-2009	Not Quantified	Not Quantified
OFF-RD LSI-1	Set Lower Emission Standards for New Off-Road Gas Engines (Spark Ignited Engines 25 hp and Greater)	2004-2005	0	0.8
OFF-RD LSI-2	Clean Up Existing Off-Road Gas Equipment Through Retrofit Controls (Spark-Ignition Engines 25 hp and Greater)	2004	0.5-1.4	1.5-3.5
OFF-RD LSI-3	Require New Forklift Purchases and Forklift Rentals to be Electric – Lift Capacity <8,000 pounds	2003	0.7-1.4	2.3-4.7
SMALL OFF-RD-1	Set Lower Emission Standards for New Handheld Lawn and Garden Equipment (Spark Ignited Engines Under 25 hp such as Weed Trimmers, Leaf Blowers, and Chainsaws)	2003	0.6	0.1
SMALL OFF-RD-2	Set Lower Emission Standards for New Non-Handheld Lawn and Garden Equipment (Spark Ignited Engines Under 25 hp such as Lawnmowers)	2003	5	0.8
MARINE-2	Pursue Approaches to Clean Up the Existing Harbor Craft Fleet – Cleaner Engines and Fuels	2003-2005	0.1	2.7
MARINE-4	Pursue Approaches to Reduce Land-Based Port Emissions – Alternative Fuels, Cleaner Engines, Retrofit Controls, Electrification, Education Programs, Operational Controls	2003-2005	0.1	0.1
FUEL-1	Set Additives Standards for Diesel Fuel to Control Engine Deposits	2006-2009	Not Quantified	Not Quantified

Strategy	Name	Final Action Date	Reductions in Tons per Day (2010)	
			ROG	NOx
FUEL-2	Set Low-Sulfur Standards for Diesel Fuel for Trucks/Buses, Off-Road Equipment, and Stationary Engines	2003-2005	Enabling	Enabling
CONS-1	Set New Consumer Products Limits for 2006	2004	2.3	0
CONS-2	Set New Consumer Products Limits for 2008-2010	2006-2008	8.5-15	0
FVR-1	Increase Recovery of Fuel Vapors from Aboveground Storage Tanks	2003	0-0.1	0
FVR-2	Recover Fuel Vapors from Gasoline Dispensing at Marinas	2006-2009	0-0.1	0
FVR-3	Reduce Fuel Permeation Through Gasoline Dispenser Hoses	2004	0-0.7	0

c. ARB Commitment to Reduce Emissions via Long-Term Strategy

The federal Clean Air Act (CAA) recognizes that extreme ozone nonattainment areas, such as the South Coast, must rely on evolving technologies to meet attainment goals. As such, CAA Section 182(e)(5) specifically authorizes the inclusion of long-term measures that anticipate the development of new control techniques or improvement of existing control technologies.

The approved 1999 South Coast SIP included commitments for long-term State and federal measures approved under Section 182(e)(5). ARB adopted its defined long-term measures, including the Low Emission Vehicles II and Heavy-Duty Diesel Off-Road standards earlier than anticipated in the SIP. While ARB has satisfied its existing long-term commitment to reduce NOx, the State must adopt additional measures to fulfill its existing long-term commitment to cut ROG. The measures shown in Table I-3 could provide about half of the remaining ROG reductions from the prior "black box," as well as additional NOx reductions.

The proposed new long-term strategy is intended to fill the gap in 2010 between the ROG reductions that will be achieved via the biennial adoption commitments and the remainder of the existing State and federal obligation to reduce ROG by 118 tons per day under the approved 1999 SIP.

ARB commits to establish a formal process to examine the universe of source categories for which the State has jurisdiction to determine how additional reductions can be achieved to satisfy the remainder of the long-term commitment. The examination will also include approaches that require federal participation and implementation to meet reduction goals. To ensure that the list of potential measures is dynamic, ARB staff will request periodic public input. Beginning in 2004, ARB staff will solicit written proposals for innovative control concepts from the public and conduct technical workshops to further explore promising ideas. By 2007, ARB expects to identify the remaining measures needed to provide the long-term strategy reductions,

and commits to adopt such measures by 2009 and implement such measures prior to the beginning of the ozone season in 2010.

Table I-4 contains an initial list of possible approaches that ARB staff will pursue to identify suitable long-term measures. The formal process will offer the public an opportunity to expand on this initial list.

Table I-4
Possible Approaches for Long-Term Measures

Light/Medium Duty Vehicles	▪ Provide incentives for voluntary passenger vehicle retirement
Smog Check	Explore program expansion to increase benefits, including: ▪ Statewide enhanced smog check ▪ Opt-in to test-only program ▪ Halting rolling 30-year exemption at pre-1974 vehicles
On-Road Heavy Duty Vehicles	▪ Provide incentives for cleaner trucks and buses, including school buses
Off-Road Class I Vehicles	▪ Provide incentives for cleaner off-road equipment
Airports	▪ Pursue approaches to reduce emissions from vehicles traveling to and from airports
Railroad Locomotives	▪ Pursue tighter federal emission standards for new and re-manufactured locomotives
Diesel Engines	▪ Set toxics standard for existing stationary diesel fueled engines – over 50 hp ▪ Set toxics standard for existing portable diesel engines ▪ Set toxics standard for new and existing small stationary diesel engines – under 50 hp ▪ Set toxics standard for diesel-fueled refrigeration units on trucks
Fuels	▪ Set sulfur/ash content limits for diesel engine lubricating oils ▪ Support infrastructure for zero emission vehicles – electric, fuel cell, hydrogen
Consumer Products	▪ Future consumer products regulations
Incentives	▪ Establish clean air labeling program ▪ Continue Statewide energy conservation program ▪ Consider Statewide public education campaign for air quality

Preliminary modeling analyses for the new 2003 South Coast SIP indicate that all of the ROG reductions identified in the 1999 SIP (and possibly more) may be needed to attain the federal one-hour ozone standard in the South Coast Air Basin. If the final modeling demonstrates a need for further reductions, ARB will participate with the other

responsible agencies -- the District, the U.S. EPA and the Southern California Association of Governments -- to identify a supplemental strategy for inclusion in the proposed 2003 SIP. The total reductions proposed in the final 2003 SIP for measures under Section 182(e)(5) will depend on the attainment demonstration.

2. Other State Measures

Since the control strategy in this element would replace the approved SIP strategy in its entirety, we must reflect any existing SIP measures that other State agencies are still in the process of implementing. Further improvements to the enhanced vehicle inspection and maintenance program, or Smog Check will provide emission reductions as shown in Table I-5. This implementation may require additional regulatory action. Anticipated ROG reductions from pesticide emissions in the South Coast have been achieved and incorporated into the baseline inventory.

Table I-5
Other State Measures

Strategy	Name	Final Action Date	Reductions in Tons per Day (2010)	
			ROG	NOx
LT/MED-DUTY-2	Improve Smog Check to Reduce Emissions from Existing Passenger and Cargo Vehicles	2003-2009	5.6-5.8	8.0-8.4
PEST-1	Implement Existing Pesticide Strategy	---	Baseline	Not Applicable

3. Federal Measures

As established in the 1994 SIP and reaffirmed in the 1999 SIP, the South Coast needs reductions from sources under the legal, or practical, control of the federal government to attain national air quality standards. These sources include interstate trucks registered outside California, certain farm and construction equipment, locomotives, marine vessels, and aircraft, as well as the fuels sold outside California for these engines.

In a joint process that grew from federal measures identified in the 1994 SIP, U.S. EPA and ARB have partnered effectively to share technical resources in developing new emissions standards or other approaches to cut emissions from source categories under shared authority. The agency staffs continue to coordinate on future rulemaking efforts. As part of its assessment of viable emission reduction strategies for the 2003 South Coast SIP, ARB staff defined six technically feasible measures (or elements of larger strategies) that require federal action.

The 2003 SIP relies on the federal government to achieve at least the reductions shown in Table I-6, and to develop and propose the six measures in Table I-7 (described in detail in Section II of this document). This parallels the structure of the

proposed ARB commitments for sources under State jurisdiction. ARB also expects that the federal government will implement strategies, or provide funding or other incentives, to achieve the remainder of the ROG reduction obligations from federal sources in the approved 1999 SIP. Finally, ARB anticipates that U.S. EPA and other federal agencies will contribute further emission reductions to meet the region's attainment target, consistent with the emissions contribution from federal sources. Specifically, State and local agencies will make commitments for reductions from long-term strategies with the understanding that U.S. EPA will discharge its responsibilities under the Clean Air Act by undertaking rulemaking to promulgate any measures that are determined to be appropriate for U.S. EPA and needed for ozone attainment in the South Coast. ARB looks forward to working with U.S. EPA to further define the federal element for the proposed 2003 South Coast SIP.

For the purposes of this draft, Table I-6 shows the range of emission reductions from potential defined federal measures. ARB staff intends to propose a specific adoption schedule for federal measures in the final SIP.

Table I-6
Federal Adoption Responsibilities from Defined Measures*
(emission reductions in tons per day in 2010)

	TOTAL FEDERAL
ROG	1.4-2.6
NOx	14.1-22.5

*does not include remainder of existing federal ROG reduction obligation under 1999 South Coast SIP, or any federal contribution to the long-term "Black Box" strategy

Table I-7
Federal Measures

Strategy	Name	Final Action Date	Reductions in Tons per Day (2010)	
			ROG	NOx
ON-RD HVY-DUTY-3	Pursue Approaches to Clean Up the Existing and New Truck/Bus Fleet (on-board diagnostics and in-use testing)	2003-2005	Not Quantified	Not Quantified
OFF-RD CI-1	Set Lower Emission Standards for New Off-Road Compression Ignition Engines	2004	0-0.1	0
FUEL-2	Set Low-Sulfur Standards for Diesel Fuel for Trucks/Buses, Off-Road Equipment, and Stationary Engines	2003-2005	Enabling	Enabling
MARINE-1	Set More Stringent Emission Standards for New Harbor Craft and Ocean-Going Ships	2003-2004	0.4	3.1
MARINE-3	Pursue Approaches to Clean Up the Existing Ocean-Going Ship Fleet – Cleaner Fuels, Incentives for Cleaner Ships, Smoke (Opacity) Limits	2003-2005	1.0-1.6	11-17.6
AIRPORT-1	Pursue Approaches to Reduce Emissions from Jet Aircraft – More Stringent Engine Standards, Retrofit Controls, Cleaner Fuel, Apply Standards to Non-Tactical Military Aircraft	2004-2009	0-0.5	0-1.8

4. Summary of New State and Federal SIP Element

The emission reductions expected from measures affecting State and federal sources are summarized in Table I-8 below.

Table I-8
Total Reductions from New State and Federal SIP Element

Agency/Measure Type	Reductions Tons per Day (2010)	
	ROG	NOx
ARB/Adoption Commitment and Defined Measures	25.4-65.1	16.3-37.7
ARB/Long-Term Strategy	85.6-44.5	0
- ARB Subtotal	**111.0-109.6**	**16.3-37.7**
ARB Subtotal	111.0-109.6	16.3-37.7
BAR Remaining Smog Check Improvements	5.6-5.8	8.0-8.4
DPR Existing Pesticide Measure	Baseline	Not Applicable
- State Subtotal	**116.6-115.4**	**24.3-46.1**
U.S. EPA/Federal Measures	1.4-2.6	14.1-22.5
- Federal Subtotal	**1.4-2.6**	**14.1-22.5**
Total - New State and Federal Element	**118**	**38.4-68.6**

The defined state and federal SIP measures are summarized in Table I-9 below.

TABLE I-9
Defined State and Federal SIP Measures

Strategy (Agency)	Name	Expected Reductions, tpd (South Coast 2010)		Action Dates	Implementation Dates
		ROG	NOx		
LT/MED-DUTY-1 (ARB)	Replace or Upgrade Emission Control Systems on Existing Passenger Vehicles – Pilot Program.	0-21	0-14	2005	2007-2008
LT/MED-DUTY-2 (BAR)	Smog Check Improvements	5.6-5.8	8.0-8.4	2003-2009	2003-2010
ON-RD HVY-DUTY-1 (ARB)	Augment Truck and Bus Highway Inspections with Community-Based Inspections	0-0.1	0	2003	2005
ON-RD HVY-DUTY-2 (ARB)	Capture and Control Vapors from Gasoline Cargo Tankers	4-5	0	2003	2004-2005
ON-RD HVY-DUTY-3 (ARB/ U.S. EPA)	Pursue Approaches to Clean Up the Existing and New Truck/Bus Fleet – PM In-Use Emission Control, Engine Software Upgrade, On-Board Diagnostics, Manufacturers' In-Use Compliance, Reduced Idling	1.3-4.3	8-11	2003-2005	2004-2010
OFF-RD CI-1 (ARB)	Set Lower Emission Standards for New Off-Road Compression Ignition Engines	0-0.1	0	2004	2007-2015
OFF-RD CI-1 (U.S. EPA)	Set Lower Emission Standards for New Off-Road Compression Ignition Engines	0-0.1	0	2004	2007-2015
OFF-RD CI-2 (ARB)	Pursue Approaches to Clean Up the Existing Heavy-Duty Off-Road Equipment Fleet (Compression Ignition Engines) – Retrofit Controls	2.3-7.8	Not Quantified	2004-2008	2006-2010
OFF-RD CI-3 (ARB)	Implement Registration and Inspection Program for Existing Off-Road Equipment to Detect Excess Emissions (Compression Ignition Engines)	Not Quantified	Not Quantified	2006-2009	2010
OFF-RD LSI-1 (ARB)	Set Lower Emission Standards for New Off-Road Gas Engines (Spark Ignited Engines 25 hp and Greater)	0	0.8	2004-2005	2007

Strategy (Agency)	Name	Expected Reductions, tpd (South Coast 2010)		Action Dates	Implementation Dates
		ROG	NOx		
OFF-RD LSI-2 (ARB)	Clean Up Existing Off-Road Gas Equipment Through Retrofit Controls (Spark-Ignition Engines 25 hp and Greater)	0.5-1.4	1.5-3.5	2004	2006-2012
OFF-RD LSI-3 (ARB)	Require new Forklift Purchases and Forklift Rentals to be Electric – Lift Capacity <8,000 pounds	0.7-1.4	2.3-4.7	2003	2005-2010
SMALL OFF-RD-1 (ARB)	Set Lower Emission Standards for New Handheld Lawn and Garden Equipment (Spark Ignited Engines Under 25 hp such as Weed Trimmers, Leaf Blowers, and Chainsaws)	0.6	0.1	2003	2005
SMALL OFF-RD-2 (ARB)	Set Lower Emission Standards for New Non-Handheld Lawn and Garden Equipment (Spark Ignited Engines Under 25 hp such as Lawnmowers)	5	0.8	2003	2006
MARINE-1 (U.S. EPA)	Set More Stringent Emission Standards for New Harbor Craft and Ocean-Going Ships	0.4	3.1	2003-2004	2008-2010
MARINE-2 (ARB)	Pursue Approaches to Clean Up the Existing Harbor Craft Fleet – Retrofit Controls, Cleaner Fuels	0.1	2.7	2003-2005	2005
MARINE-3 (U.S. EPA)	Pursue Approaches to Clean Up the Existing Ocean-Going Ship Fleet – Cleaner Fuels, Incentives for Cleaner Ships, Smoke (Opacity) Limits	1.0-1.6	11-17.6	2003-2005	2005-2010
MARINE-4 (ARB)	Pursue Approaches to Reduce Land-Based Emissions at Ports – Alternative Fuels, Cleaner Engines, Retrofit Controls, Electrification, Education Programs, Operational Controls	0.1	0.1	2003-2005	2003-2010
AIRPORT-1 (U.S. EPA)	Pursue Approaches to Reduce Emissions from Jet Aircraft – Cleaner Engines/Retrofit Controls, Aerodynamic Design, Fleet Purchase Strategy, Emission-Based Landing Fees, Cleaner Fuel, Operational Measures	0-0.5	0-1.8	2004-2009	2008-2015
FUEL-1 (ARB)	Set Additives Standards for Diesel Fuel to Control Engine Deposits	Not Quantified	Not Quantified	2006-2009	2006-2010

Strategy (Agency)	Name	Expected Reductions, tpd (South Coast 2010)		Action Dates	Implementation Dates
		ROG	NOx		
FUEL-2 (ARB/ U.S. EPA)	Set Low-Sulfur Standards for Diesel Fuel for Trucks/Buses, Off-Road Equipment, and Stationary Engines	Enabling	Enabling	2003-2005	2006 (ARB) 2010 (U.S. EPA)
CONS-1 (ARB)	Set New Consumer Products Limits for 2006	2.3	0	2004	2006
CONS-2 (ARB)	Set New Consumer Products Limits for 2006-2010	8.5-15	0	2006-2008	2008-2010
FVR-1 (ARB)	Increase Recovery of Fuel Vapors from Aboveground Storage Tanks	0-0.1	0	2003	2007
FVR-2 (ARB)	Recover Fuel Vapors from Gasoline Dispensing at Marinas	0-0.1	0	2006-2009	2006-2010
FVR-3 (ARB)	Reduce Fuel Permeation Through Gasoline Dispenser Hoses	0-0.7	0	2004	2007
PEST-1 (DPR)	Implement Existing Pesticide Measure	Baseline	Baseline	---	1996-2010
	Subtotal	**32.4-73.5**	**38.4-68.6**		

B. POST-2010 BENEFITS OF STATE AND FEDERAL SIP MEASURES

Many of the proposed SIP commitments have relatively modest emission reductions projected for 2010, the one-hour federal ozone attainment date for the South Coast. In many cases, particularly for mobile source strategies, the benefits of the anticipated control measures increase substantially after 2010 as older engines are replaced with cleaner models.

It is critical that local, State, and federal agencies continue to pursue every available emission reduction, even if some of those benefits will not be fully realized until post-2010. The South Coast will need additional reductions to maintain the federal one-hour ozone standard, and to attain the more health-protective federal and State standards for ozone and particulate matter.

In 1997, U.S. EPA promulgated tighter new federal air quality standards for eight-hour ozone and fine particulate matter (PM2.5). Almost half of the counties in California (including Los Angeles, Orange and portions of Riverside and San Bernardino Counties) are anticipated to be nonattainment for the eight-hour ozone standard. Based on early air quality monitoring data, the South Coast, San Joaquin Valley and some other urban areas are also likely to be nonattainment for the federal PM2.5 standard. Because a large proportion of the emissions contributing to California's ozone and fine particulate problems are from sources under State and federal authority, additional State and federal measures to reduce the impact of cars, trucks and equipment will be critical to meeting the new federal standards in the post-2010 timeframe. Achieving those standards will require substantial emission reductions beyond those needed to meet the one-hour federal standard.

In addition, as the population of California, and Southern California, continues to grow, additional people will increase the number of cars, trucks, lawnmowers, heavy equipment, consumer products and other emission sources being used in the State. Even after areas attain all health-based standards, ARB and the local districts must continue to push for new emission reductions simply to maintain healthful air.

For informational purposes only, we have estimated the potential emission reductions of the defined State and federal SIP measures in 2015 and 2020, as shown in Table I-10. These emission reductions will help South Coast maintain the federal one-hour ozone standard and attain the more health-protective new federal and State ozone and particulate matter standards.

Table I-10
Potential Benefits of Defined State and Federal SIP Measures Post-2010
(tons per day)

	ROG	NOx
2010[1]	32-74	38-69
2015[1]	36-71	56-84
2020[1]	39-68	79-100

1 -- These are the reductions from defined State and federal measures; the reductions from ARB's long-term strategy would provide additional benefits.

The high-end estimate of ROG benefits is lower in future years because there are fewer emissions left to reduce. For NOx, the benefits grow over time because new standards continue to be phased in post-2010.